## Lesson 5: Function Representations

- Let's examine different representations of functions.


## 5.1: Notice and Wonder: Representing Functions

What do you notice? What do you wonder?
$f(x)=\frac{2}{3} x-1$


| $x$ | $y$ |
| :---: | :---: |
| -1 | $-\frac{5}{3}$ |
| 0 | -1 |
| 1 | $-\frac{1}{3}$ |
| 2 | $\frac{1}{3}$ |
| 3 | 1 |

## 5.2: A Seat at the Tables

Use the equations to complete the tables.

1. $y=3 x-2$

| $x$ | $y$ |
| :---: | :---: |
| 1 |  |
| 3 |  |
| -2 |  |

2. $y=5-2 x$

| $x$ | $y$ |
| :--- | :--- |
| 0 |  |
| 3 |  |
| 5 |  |

3. $y=\frac{1}{2} x+2$

| $x$ | $y$ |
| :---: | :---: |
| -4 |  |
| 3 |  |
| 6 |  |

4. 

| $x$ | $y=2 x-10$ |
| :--- | :--- |

3
7
-8

## 5.3: Function Finder

1. Use the values in the table to graph a possible function that would have the values in the table.
a.

| $x$ | $y$ |
| :---: | :---: |
| 1 | 3 |
| 2 | 5 |
| 3 | 7 |
| 5 | 11 |


b.

| $x$ | $y$ |
| :---: | :---: |
| -2 | 0 |
| 0 | 1 |
| 2 | 2 |
| 4 | 3 |


C.

| $x$ | $y$ |
| :---: | :---: |
| -2 | 14 |
| -1 | 12 |
| 1 | 8 |
| 2 | 6 |


2. For each of the tables and graphs, write a linear equation (like $y=a x+b$ ) so that the table can be created from the equation.
3. Invent your own linear equation. Then, create a table or graph, including at least 4 points, to trade with your partner. After getting your partner's table or graph, guess the equation they invented.

